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### CLAIMS

1. An isolated polypeptide having chemotactic activity selected from the group consisting of:
  - a) the amino acid sequences SEQ ID NO: 2, 4, 6, 8, 10, 12, 14 or 16;
  - 5 b) the mature form of the polypeptides SEQ ID NO: 2, 4, 6, 8, 10, 12, 14 or 16;
  - c) the polypeptides comprising the Cysteine-rich region of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14 or 16, as indicated in fig. 9 and 10;
  - d) the active variants of the amino acid sequence given by SEQ ID NO: 2, 4, 6, 8, 10, 12, 14 or 16 wherein any amino acid specified in the chosen  
10 sequence is non-conservatively substituted, provided that no more than 15% of the amino acid residues in the sequence are so changed;
  - e) the active fragments, precursors, salts, or derivatives of the amino acid sequences given in a) to d).
- 15 2. The polypeptide of claim 1 that is a naturally occurring allelic variant of the sequence given by SEQ ID NO: 2, 4, 6, 8, 10, 12, 14 or 16.
3. The polypeptide of claim 2, wherein the variant is the translation of a single nucleotide polymorphism.
- 20 4. The polypeptide of any of the claims from 1 to 3, wherein the polypeptide binds specifically an antibody or a binding protein generated against SEQ ID NO: 2, 4, 6, 8, 10, 12, 14 or 16 or a fragment thereof.

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5. A fusion protein comprising a polypeptide according to any of the claims from 1 to 4.

6. The fusion proteins of claim 6 wherein said proteins further comprise one or more amino acid sequence belonging to these protein sequences: membrane-bound protein, immunoglobulin constant region, multimerization domains, extracellular proteins, signal peptide-containing proteins, export signal-containing proteins.

7. An antagonist of a polypeptide of any of the claims from 1 to 4, wherein said antagonist comprises an amino acid sequence resulting from the modification of one or more residues of said polypeptide.

8. A ligand binding specifically to a polypeptide according to any one of claims 1 to 4.

9. The ligand of claim 8 that antagonizes or inhibits the chemotactic activity of a polypeptide according to any one of claims 1 to 4.

10. A ligand according to claim 11 which is a monoclonal antibody, a polyclonal antibody, a humanized antibody, an antigen binding fragment, or the extracellular domain of a membrane-bound protein.

11. The polypeptides of any of the claims from 1 to 7 or of claim 10, wherein said polypeptides are in the form of active conjugates or complexes with a molecule chosen amongst radioactive labels, fluorescent labels, biotin, or cytotoxic agents.

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12. A peptide mimetic designed on the sequence and/or the structure of a polypeptide according to any one of claims 1 to 4.

5 13. An isolated nucleic acid encoding for an isolated polypeptide selected from the group consisting of:

- a) the polypeptides having chemotactic activity of any of the claims from 1 to 4;
- b) the fusion proteins of claim 5 or 6; or
- c) the antagonists of claim 7.

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14. The nucleic acid of claim 13, comprising a DNA sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, or 15, or the complement of said DNA sequences.

15 15. A purified nucleic acid which:

- a) hybridizes under high stringency conditions, or
- b) exhibits at least about 85% identity over a stretch of at least about 30 nucleotides,

with a nucleic acid selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9,

20 11, 13, or 15, or a complement of said DNA sequences

16. A vector comprising a nucleic acid of any of claims from 13 to 15.

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17. The vector of claim 16, wherein said nucleic acid molecule is operatively linked to expression control sequences allowing expression in prokaryotic or eukaryotic host cells of the encoded polypeptide.

5 18. The polypeptides encoded by the purified nucleic acids of claim 15.

19. A process for producing cells capable of expressing a polypeptide of any the claims from 1 to 7 or of claim 18, comprising genetically engineering cells with a vector or a nucleic acid according to any of the claims from 13 to 17.

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20. A host cell transformed with a vector or a nucleic acid according to any of the claims from 13 to 17.

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21. A transgenic animal cell that has been transformed with a vector or a nucleic acid according to any of the claims from 13 to 17, having constitutive or inducible altered expression levels of a polypeptide according to any one of claims from 1 to 4.

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22. A transgenic non-human animal that has been transformed to have enhanced or reduced expression levels of a polypeptide according to any one of claims from 1 to 4.

23. A method for making a polypeptide of any the claims from 1 to 7 comprising culturing a cell of claim 20 or 21 under conditions in which the nucleic acid or

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vector is expressed, and recovering the polypeptide encoded by said nucleic acid or vector from the culture.

24. A compound that enhances the expression level of a polypeptide according to  
5 any one of claims from 1 to 4 into a cell or in an animal.

25. A compound that reduces the expression level of a polypeptide according to any one of claims from 1 to 4 into a cell or in an animal.

10 26. The compound of claim 24 that is an antisense oligonucleotide or a small interfering RNA.

27. Purified preparations containing a polypeptide of any of the claims from 1 to 6 or claim 18, an antagonist of claim 7, a ligand of any of the claims from 8 to 10,  
15 peptide mimetic of claim 12, a nucleic acid of any of the claims from 13 to 17, a cell of claim 20 or 21, or a compound of any of the claims from 24 to 26.

28. Use of a polypeptide of any of the claims from 1 to 6 or claim 18, a peptide mimetic of claim 12, a nucleic acid of any of the claims from 13 to 17, a cell of  
20 claim 20 or 21, or a compound of claim 24, in the therapy or in the prevention of a disease when the increase in the chemotactic activity of a polypeptide of any of the claims from 1 to 4 is needed.

29. Pharmaceutical compositions for the treatment or prevention of diseases needing  
25 an increase in the chemotactic activity of a polypeptide of any of the claims from

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1 to 6 or claim 18, a peptide mimetic of claim 12, a nucleic acid of any of the claims from 13 to 17, a cell of claim 20 or 21, or a compound of claim 24, as active ingredient.

- 5 30. Process for the preparation of pharmaceutical compositions, which comprises combining a polypeptide of any of the claims from 1 to 6 or claim 18, a peptide mimetic of claim 12, a nucleic acid of any of the claims from 13 to 17, a cell of claim 20 or 21, or a compound of claim 24, together with a pharmaceutically acceptable carrier.

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31. Method for the treatment or prevention of diseases needing an increase in the chemotactic activity of a polypeptide of any of the claims from 1 to 4; comprising the administration of a therapeutically effective amount of a polypeptide of any of the claims from 1 to 6 or claim 18, a peptide mimetic of claim 12, a nucleic acid of  
15 any of the claims from 13 to 17, a cell of claim 20 or 21, or a compound of claim 24.

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32. Use of an antagonist of claim 7, a ligand of any of the claims from 8 to 10, or of a compound of claims 25 or 26, in the therapy or in the prevention of a disease associated to the excessive chemotactic activity of a polypeptide of any of the claims from 1 to 4.

33. Pharmaceutical compositions for the treatment or prevention of a disease associated to the excessive chemotactic activity of a polypeptide of any of the

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claims from 1 to 4, containing an antagonist of claim 7, a ligand of any of the claims from 8 to 10, or of a compound of claims 25 or 26, as active ingredient.

- 5 34. Process for the preparation of pharmaceutical compositions for the treatment or prevention of diseases associated to the excessive chemotactic activity of a polypeptide of any of the claims from 1 to 4, which comprises combining an antagonist of claim 7, a ligand of any of the claims from 8 to 10, or of a compound of claims 25 or 26, together with a pharmaceutically acceptable carrier.
- 10 35. A method for the treatment or prevention of diseases related to the polypeptide of any of the claims from 1 to 4, comprising the administration of a therapeutically effective amount of an antagonist of claim 7, a ligand of any of the claims from 8 to 10, or of a compound of claims 25 or 26.
- 15 36. A method for screening candidate compounds effective to treat a disease related to the chemokine-like polypeptides of any of the claims from 1 to 4, comprising:  
(a) contacting a cell of claim 20, a transgenic animal cell of claim 21, or a transgenic non-human animal according to claim 22, having enhanced or reduced expression levels of the polypeptide, with a candidate compound and  
20 (b) determining the effect of the compound on the animal or on the cell.
37. A method for identifying a candidate compound as an antagonist/inhibitor or agonist/activator of a polypeptide of any of the claims 1 to 4 comprising:  
(a) contacting said polypeptide, said compound, and a mammalian cell or a  
25 mammalian cell membrane capable of binding the polypeptide; and

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(b) measuring whether the molecule blocks or enhances the interaction of the polypeptide, or the response that results from such interaction, with the mammalian cell or the mammalian cell membrane.

5 38. A method for determining the activity and/or the presence of the polypeptide of any the claims from 1 to 4 in a sample, the method comprising:

(a) providing a protein-containing sample;

(b) contacting said sample with a ligand of any of the claims from 8 to 10; and

(c) determining the presence or said ligand bound to said polypeptide.

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39. A method for determining the presence or the amount of a transcript or of a nucleic acid encoding the polypeptide of any the claims from 1 to 4 in a sample, the method comprising:

(a) providing a nucleic acids-containing sample;

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(b) contacting said sample with a nucleic acid of any of the claims 13 to 17; and

(c) determining the hybridization of said nucleic acid with a nucleic acid into the sample.

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40. Use of the primer sequences containing the sequences SEQ ID NO: 17-28 for determining the presence or the amount of a transcript or of a nucleic acid encoding a polypeptide of any the claims from 1 to 4 in a sample by Polymerase Chain Reaction

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41. A kit for measuring the activity and/or the presence of the chemokine-like polypeptides of any of the claims from 1 to 4 in a sample comprising one or more

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of the following reagents: a polypeptide of any of the claims from 1 to 6 or claim 18, an antagonist of claim 7, a ligand of any of the claims from 8 to 10, a polypeptide of claim 11, a peptide mimetic of claim 12, a nucleic acid of any of the claims from 13 to 17, a cell of claim 20 or 21, a compound of any of the claims from 24 to 26, a pharmaceutical composition of claims 29 or 33, or primer sequences containing the sequences SEQ ID NO: 17-28.

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